

Amitrole
6839/VI/97-final
22 March 2001

Review report for the active substance **amitrole**

Finalised in the Standing Committee on Plant Health at its meeting on **12 December 2000**
in view of the inclusion of amitrole in Annex I of Directive 91/414/EEC

1. Procedure followed for the re-evaluation process

This review report has been established as a result of the re-evaluation of amitrole, made in the context of the work programme for review of existing active substances provided for in Article 8(2) of Directive 91/414/EEC concerning the placing of plant protection products on the market, with a view to the possible inclusion of this substance in Annex I to the Directive.

Commission Regulation (EEC) No 3600/92⁽¹⁾ laying down the detailed rules for the implementation of the first stage of the programme of work referred to in Article 8(2) of Council Directive 91/414/EEC, as last amended by Regulation (EC) No 1972/99⁽²⁾, has laid down the detailed rules on the procedure according to which the re-evaluation has to be carried out. amitrole is one of the 90 existing active substances covered by this Regulation.

In accordance with the provisions of Article 4 of Regulation (EEC) No 3600/92, Bayer AG on 21 July 1993, CFPI on 28 July 1993, Helm AG on 23 July 1993, SA John & Stephen B. on 29 July 1993 and B.V. Luxan on 21 July 1993 notified to the Commission of their wish to secure the inclusion of the active substance amitrole in Annex I to the Directive.

In accordance with the provisions of Article 5 of Regulation (EEC) No 3600/92, the Commission, by its Regulation (EEC) No 933/94⁽³⁾, as last amended by Regulation (EC) No 2230/95⁽⁴⁾, designated France as rapporteur Member State to carry out the assessment of amitrole on the basis of the dossiers submitted by the notifiers. In the same Regulation, the Commission specified furthermore the deadline for the notifiers with regard to the submission to the rapporteur Member States of the dossiers required under Article 6(2) of Regulation (EEC) No

¹ OJ No L 366, 15.12.1992, p.10.

² OJ No L 244, 16.09.1999, p.41.

³ OJ No L 107, 28.04.1994, p.8.

⁴ OJ No L 225, 22.09.1995, p.1.

3600/92, as well as for other parties with regard to further technical and scientific information; for amitrole this deadline was 30 April 1995.

Bayer AG and CFPI jointly submitted a dossier to the rapporteur Member State. CFPI was the main data submitter, with a dossier which did not contain substantial data gaps, taking into account the supported uses. The dossier was considered as complete. No information has further been submitted by third parties.

In accordance with the provisions of Article 7(1) of Regulation (EEC) No 3600/92, France submitted on 30 April 1996 to the Commission the report of its examination, hereafter referred to as the draft assessment report, including, as required, a recommendation concerning the possible inclusion of amitrole in Annex I to the Directive. Moreover, in accordance with the same provisions, the Commission and the Member States received also the summary dossier on amitrole from CFPI, on 6 January 1997.

In accordance with the provisions of Article 7(3) of Regulation (EEC) No 3600/92, the Commission forwarded for consultation the draft assessment report to all the Member States on 25 October 1996 as well as to CFPI being the main data submitter, on 6 November 1996.

The Commission organised an intensive consultation of technical experts from a certain number of Member States, to review the draft assessment report and the comments received thereon (peer review), in particular on each of the following disciplines:

- identity and physical /chemical properties ;
- fate and behaviour in the environment ;
- ecotoxicology ;
- mammalian toxicology ;
- residues and analytical methods ;
- regulatory questions.

The meetings for this consultation were organised on behalf of the Commission by the Pesticide Safety Directorate (PSD) in York, United Kingdom, from January to April 1997.

The report of the peer review (i.e. full report) was circulated, for further consultation, to Member States and the main data submitter on 10 April 1997 for comments and further clarification.

In accordance with the provisions of Article 6(4) of Directive 91/414/EEC concerning consultation in the light of a possible unfavourable decision for the active substance the Commission organised a tripartite meeting with the main data submitter and the rapporteur Member State for this active substance on 17 November 1997.

In accordance with the provisions of Article 7(3) of Regulation (EEC) No 3600/92, the dossier, the draft assessment report, the peer review report (i.e. full report) and the comments and clarifications on the remaining issues, received after the peer review were referred to the Standing Committee on Plant Health, and specialised working groups of this Committee, for final examination, with participation of experts from the 15 Member States. This final examination took place from February 1998 to October 2000, and was finalised in the meeting of the Standing Committee on 12 December 2000.

The present review report contains the conclusions of this final examination; given the importance of the draft assessment report, the peer review report (i.e. full report) and the comments and clarifications submitted after the peer review as basic information for the final examination process, these documents are considered respectively as background documents A, B and C to this review report and are part of it.

These documents were also submitted to the Scientific Committee for Plants for separate consultation. The report of this Committee was formally adopted on 6 June 2000 (SCP/AMITR/002-Final⁵).

2. Purposes of this review report

This review report, including the background documents and appendices thereto, have been developed and finalised in support of the Directive 2001/21/EC concerning the inclusion of amitrole in Annex I to Directive 91/414/EEC, and to assist the Member States in decisions on individual plant protection products containing amitrole they have to take in accordance with the provisions of that Directive, and in particular the provisions of article 4(1) and the uniform principles laid down in Annex VI.

This review report provides also for the evaluation required under Section A.2.(b) of the above mentioned uniform principles, as well as under several specific sections of part B of these principles. In these sections it is provided that Member States, in evaluating applications and granting authorisations, shall take into account the information concerning the active substance in Annex II of the directive, submitted for the purpose of inclusion of the active substance in Annex I, as well as the result of the evaluation of those data.

In accordance with the provisions of Article 7(6) of Regulation (EEC) No 3600/92, Member States will keep available or make available this review report for consultation by any interested parties or will make it available to them on their specific request. Moreover the Commission will send a copy of this review report (not including the background documents) to all operators having notified for this active substance under Article 4(1) of this Regulation.

The information in this review report is, at least partly, based on information which is confidential and/or protected under the provisions of Directive 91/414/EEC. It is therefore recommended that this review report would not be accepted to support any registration outside the context of Directive 91/414/EEC, e.g. in third countries, for which the applicant has not demonstrated to have regulatory access to the information on which this review report is based.

3. Overall conclusion in the context of Directive 91/414/EEC

The overall conclusion from the evaluation is that it may be expected that plant protection products containing amitrole will fulfil the safety requirements laid down in Article 5(1)(a) and (b) of Directive 91/414/EEC. This conclusion is however subject to compliance with the particular requirements in sections 4, 5, 6 and 7 of this report, as well as to the implementation of the provisions of Article 4(1) and the uniform principles laid down in Annex VI of Directive

⁵ Opinion of the scientific Committee on Plants regarding the inclusion of amitrole in Annex I to Council Directive 91/414/EEC concerning the placing of plant protection products on the market

91/414/EEC, for each amitrole containing plant protection product for which Member States will grant or review the authorisation.

Furthermore, these conclusions were reached within the framework of the following uses which were proposed and supported by the main data submitter:

- Herbicide for non-selective control of annual and perennial monocotyledonous and dicotyledonous weeds in vineyards, orchards, for intercropping and minimum tillage, and non-crop uses like railroads, roadsides or industrial settings.

Extension of the use pattern beyond those described above will require an evaluation at Member State level in order to establish whether the proposed extensions of use can satisfy the requirements of Article 4(1) and of the uniform principles laid down in Annex VI of Directive 91/414/EEC.

With particular regard to residues, the review has established that the residues arising from the proposed uses, consequent on application consistent with good plant protection practice, have no harmful effects on human or animal health. The Theoretical Maximum Daily Intake (TMDI; excluding water and products of animal origin) for a 60 kg adult is < 3 % of the Acceptable Daily Intake (ADI), based on the FAO/WHO European Diet (August 1994). Additional intake from water and products of animal origin are not expected to give rise to intake problems.

The review has identified several acceptable exposure scenarios for operators, workers and bystanders, which require however to be confirmed for each plant protection product in accordance with the relevant sections of the above mentioned uniform principles.

The review has also concluded that under the proposed and supported conditions of use there are no unacceptable effects on the environment, as provided for in Article 4 (1) (b) (iv) and (v) of Directive 91/414/EEC, provided that certain conditions are taken into account as detailed in section 6 of this report.

4. Identity and Physical/chemical properties

The main identity and the physical/chemical properties of amitrole are given in Appendix I.

The active substance shall comply with the FAO specification and there seem not to be reasons for deviating from that specification; the FAO specification is given in Appendix I of this report.

The review has established that for the active substance notified by the main data submitter CFPI none of the manufacturing impurities considered are, on the basis of information currently available, of toxicological or environmental concern.

In accordance with the provisions of Article 13(5) of Directive 91/414/EEC, France is also satisfied, on the basis of the information currently available, that the substances notified by Bayer AG does not, in the meaning of Article 13(2) and (5) of the Directive, differ significantly in degree of purity and nature of impurities from the composition registered in the dossier submitted by the main data submitter.

5. Endpoints and related information

In order to facilitate Member States, in granting or reviewing authorisations, to apply adequately the provisions of Article 4(1) of Directive 91/414/EEC and the uniform principles laid down in Annex VI of that Directive, the most important endpoints as identified during the re-evaluation process are set out under point 1 above. These endpoints are listed in Appendix II.

6. Particular conditions to be taken into account on short term basis by Member States in relation to the granting of authorisations of plant protection products containing amitrole

On the basis of the proposed and supported uses, the following particular issues have been identified as requiring particular and short term attention from all Member States, in the framework of any authorisations to be granted, varied or withdrawn, as appropriate:

- Operator exposure: Member states must pay particular attention to the protection of operators.
- Protection of the groundwater in vulnerable areas, in particular with respect to non-crop uses.
- Protection of beneficial arthropods.
- To ensure the protection of birds and wild mammals use of amitrole during the breeding season may only be authorised when an appropriate risk assessment has demonstrated that there is no unacceptable impact and when the conditions of authorisation include, where appropriate, risk mitigation measures.

7. List of studies to be generated

The main data submitter undertakes to identify two impurities of the active substance as manufactured (impurities "D" and "F")⁶. This data has to be provided to the Member States by 1 January 2002, as outlined in Article 2 of the inclusion Directive.

Some endpoints may require the generation or submission of additional studies to be submitted to the Member States in order to ensure authorisations for use under certain conditions. This may particularly be the case for

- Field studies related to the exposure of operators to permit a better estimate of the exposure.
- Further testing of the effects on non-target arthropods under semi-field or field conditions.

⁶ See background document C

8. Information on studies with claimed data protection

For information of any interested parties, Appendix III gives information about the studies for which the main data submitter has claimed data protection and which during the re-evaluation process were considered as essential with a view to annex I inclusion. This information is only given to facilitate the operation of the provisions of Article 13 of Directive 91/414/EEC in the Member States. It is based on the best information available to the Commission services at the time this review report was prepared; but it does not prejudice any rights or obligations of Member States or operators with regard to its uses in the implementation of the provisions of Article 13 of the Directive 91/414/EEC neither does it commit the Commission.

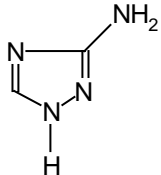
9. Updating of this review report

The technical information in this report may require to be updated from time to time in order to take account of technical and scientific developments as well as of the results of the examination of any information referred to the Commission in the framework of Articles 7, 10 or 11 of Directive 91/414/EEC. Such adaptations will be examined and finalised in the Standing Committee on Plant Health, in connection with any amendment of the inclusion conditions for amitrole in Annex I of the Directive.

APPENDIX I

Identity, physical and chemical properties

AMITROLE

| | |
|------------------------------|---|
| Common name (ISO) | Amitrole |
| Chemical name (IUPAC) | 1- <i>H</i> -1,2,4-triazol-3-ylamine |
| Chemical name (CA) | 1- <i>H</i> -1,2,4-triazol-3-amine |
| CIPAC No | 90 |
| CAS No | 61-82-5 |
| EEC No | 613-011-00-6 |
| FAO SPECIFICATION | 1998 (\geq 900g/kg) |
| Minimum purity | The active substance as manufactured shall have a specified minimum purity of at least 900 g/kg |
| Molecular formula | C ₂ H ₄ N ₄ |
| Molecular mass | 84.08 |
| Structural formula |  <p>The structural formula shows a five-membered 1,2,4-triazole ring. The nitrogen atom at the 1-position is bonded to a hydrogen atom (H) below it. The nitrogen atom at the 4-position is bonded to another nitrogen atom at the 3-position. This nitrogen at the 3-position is further bonded to an amino group (NH₂) pointing upwards and to the right.</p> |

| | |
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| Melting point | 157 - 159 °C |
| Boiling point | Not applicable |
| Appearance | Colourless crystals |
| Relative density | 1.138 at 20°C |
| Vapour pressure | $3.3 \cdot 10^{-5}$ Pa at 20 °C * |
| Henry's law constant | 1.7610^{-8} x Pa x m ³ x mol ⁻¹ at 20°C |
| Solubility in water | 280 g/l at 23 °C; pH not specified 264 g/l at pH 7, 261 g/l at pH 10 |
| Solubility in organic solvents | isopropanol : 27g/l at 20°C toluene : 0.02 g/l at 20°C dichloromethane : 0.10 g/l at 20°C n-hexane : < 0.01 g/l at 20°C |
| Partition co-efficient (log P_{ow}) | - 0.969 at pH 7 at 23 °C |
| Hydrolytic stability (DT₅₀) | Insignificant hydrolytic degradation at pH 5, 7 and 9 |
| Dissociation constant | pK ₁ 4.14 at 20°C, pK ₂ 10.7 at 20°C |
| Quantum yield of direct photo-transformation in water at λ >290 nm | Photostable No absorption at λ>290nm |
| Flammability | Brief ignition and rapid extinction |
| Explosive properties | Lower explosion limit = Ca.500 g/m ³ No sensitive to impact |
| UV/VIS absorption (max.) | UV _{max} 198 nm ; ε 4947 L.mol ⁻¹ .cm ⁻¹ |
| Photostability in water (DT₅₀) | Stable in water. |

APPENDIX II

END POINTS AND RELATED INFORMATION

AMITROLE

1 Toxicology and metabolism

Absorption, distribution, excretion and metabolism in mammals

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|--|---|
| Rate and extent of absorption: | Almost completely absorbed; oral; rat <1d (70 - 95%) |
| Distribution: | Rapid to all tissues; liver highest level |
| Potential for accumulation: | No potential for accumulation |
| Rate and extent of excretion: | Eliminated within 2 days; urine (70 - 95%) |
| Toxicologically significant compounds: | Parent (50 - 60%); + triazolylalanine |
| Metabolism in animals: | 3 minor metabolites. Presence of mercapturic acid metabolite. |

Acute toxicity

| | |
|---|--|
| Rat LD ₅₀ oral: | > 5000 mg/kg bw; no effects <u>iv</u> 5000 mg/kg |
| Rat LD ₅₀ dermal: | > 2500 mg/kg bw; no effects >10000; rabbit |
| Rat LC ₅₀ inhalation: | 0.439 mg/l |
| Skin irritation: | Not irritant. |
| Eye irritation: | Not classified. |
| Skin sensitization (test method used and result): | Not a sensitizer (M and K) |

Short term toxicity

| | |
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| Target / critical effect: | Thyroid inhibition/secondary liver; several species. |
| Lowest relevant oral NOAEL / NOEL: | 0.1 mg/kg bw/d; 90 d rat 0.3 mg/kg bw/d; 1 y dog |
| Lowest relevant dermal NOAEL / NOEL: | 100 mg/kg/d, 28d rat |
| Lowest relevant inhalation NOAEL / NOEL: | Not toxic by inhalation |

Genotoxicity

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| Possible weak effect <i>in-vitro</i> , negative <i>in-vivo</i> . |
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Long term toxicity and carcinogenicity

| | |
|---------------------------|---|
| Target / critical effect: | Thyroid inhibition; rat |
| Lowest relevant NOAEL: | 0.5 mg/kg bw/d; (effects on thyroid only) |
| Carcinogenicity: | Thyroid tumours/threshold . |

Reproductive toxicity

| | |
|--|---|
| Target / critical effect - Reproduction: | Thyroid : increase weight |
| Lowest relevant reproductive NOAEL / NOEL: | 0,9 mg/kg/d, two generation rat |
| Target / critical effect - Developmental toxicity: | Rabbit, decrease fetal weight, visceral and skeletal variants |
| Lowest relevant developmental NOAEL / NOEL: | 5 mg/kg/d rabbit maternal toxicity |

Delayed neurotoxicity

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| Not relevant |
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Other toxicological studies

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Medical data

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| Indicative data 10 mg in human - 'slight inhibition' of iodine uptake. |
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Summary

| | Value | Study | Safety factor |
|------------------------------|--|---------------------------|---------------|
| ADI: | 0.001 mg/kg bw/d; | rat 90d | 100 |
| AOEL systemic: | 0.001 mg/kg bw/d | rat 90 d | 100 |
| AOEL inhalation: | 0.25 mg/kg bw/d | 4 week inhalation; rat | 100 |
| AOEL dermal: | 1 mg/kg bw/d | 3 week dermal; rabbit/rat | 100 |
| ARfD (acute reference dose): | Not relevant in view of the hazard profile of the substance. | | |

Dermal absorption

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| 1% |
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2 Fate and behaviour in the environment

2.1 Fate and behaviour in soil

Route of degradation

Aerobic:

Mineralization after 100 days:

20 - 60 % after 7 d (25 °C)

Non-extractable residues after 100 days:

max of 20 - 50 % after 7 d

17 - 19 % after 100 d

Relevant metabolites above 10 % of applied active substance: name and/or code
% of applied rate (range and maximum)

None, all detectable metabolites < 2.5 %

Supplemental studies

Anaerobic:

Amitrole degraded more slowly than in aerobic conditions (< 50 % remaining after 56 d at 25 °C) and high levels of unextractable residues are formed.

Soil photolysis:

Stable in dry soil in the dark (91 % on day 0 to 66 % on day 30)

Slowly degraded in light with DT₅₀ of 73 d

Remarks:

None.

Rate of degradation

Laboratory studies

DT_{50lab} (20 °C, aerobic):

5 d max. (22 °C)

DT_{90lab} (20 °C, aerobic):

22 d max. (22 °C)

DT_{50lab} (10 °C, aerobic):

No data available and data not required

DT_{50lab} (20 °C, anaerobic):

< 50 % amitrole after 56 d

Field studies (country or region)

DT_{50f} from soil dissipation studies:

1 UK site (loam soil), 20 kg/ha radiolabelled amitrole (April)

DT_{50f}: 21 d (3-56 d period, 39 mm rainfall), 15 d (3-112 d period)

RA below 30 cm < 0.3 %

DT_{90f} from soil dissipation studies:

50 d (3-112 d period)

Soil accumulation studies:

Not relevant

Soil residue studies:

Not relevant

Remarks:

e.g. effect of soil pH on degradation rate

None.

Adsorption/desorption K_f / K_{oc} : K_f : 0.15 - 3.79, 8 soils OC 0.5-3.4 % pH 5.3-7.4 K_d K_{oc} = 20 - 202 (mean 91) same soils as above

pH dependence:

Within normal agricultural conditions - no effect of soil parameters.

Mobility**Laboratory studies:**

Column leaching:

Standard soil 2.1 (worst case agricultural soil) 6.8 % silt+clay, 0.6 % OC, pH 6:
24 - 31 % in leachate (mainly amitrole)
Agricultural soil 32.4 % silt+clay, 2.9 % OC, pH 5.5:
0.8 % max. in leachate

Aged residue leaching:

Incubation time was too long (30 d) therefore so much has degraded the data are not reliable.

Field studies:

Lysimeter/Field leaching studies:

No reliable data available (detection limit too high, $\mu\text{g/l}$)**Remarks:**Soil TLC shows amitrole to be intermediate to very mobile.
Available monitoring data to assess risk from crop uses
- ground water : no contamination (7 French sites, appl. To vineyard and non crop areas, 1998)
except at one site (point source contamination)
- drinking water : no contamination of drinking water coming from 5 French rivers.

2.2 Fate and behaviour in water

Abiotic degradation

Hydrolytic degradation:

DT₅₀ stable at pH 4/5, 7 and 9 (at 25 °C for 30 d)

Relevant metabolites:

None

Photolytic degradation:

Stable (at 25 °C for 30 d, pH 5 - 9).

Relevant metabolites:

None

Biological degradation

Readily biodegradable:

Not readily biodegradable

Water/sediment study:

DT₅₀ water:DT₅₀ water: 47 and 94 dDT₉₀ water:DT₉₀ water: 156 and 312 dDT₅₀ whole system:DT₅₀ whole system: 91 and 95 dDT₉₀ whole system:DT₉₀ whole system: 302 and 316 dDistribution in water / sediment systems
(active substance)

max. 10.3 % (30 d)

Distribution in water / sediment systems
(metabolites)

metabolites < 3 % each in water or sediment

Accumulation in water and/or sediment:

Amitrole is much more persistent in the sediment than in the soil.

Degradation in the saturated zone No data, not required

Remarks:

None.

2.3 Fate and behaviour in air

Volatility

Vapour pressure:

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| $3.3 \cdot 10^{-5} \text{ Pa at } 20 \text{ }^\circ\text{C}$ |
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Henry's law constant:

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|--|
| $1.76 \cdot 10^{-8} \text{ Pa}\cdot\text{m}^3\cdot\text{mol}^{-1} \text{ at } 20 \text{ }^\circ\text{C}$ |
|--|

Photolytic degradation

Direct photolysis in air:

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|--------|
| Stable |
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Photochemical oxidative degradation in air

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|-----------|
| 4.8 hours |
|-----------|

DT₅₀:

Volatilisation:

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| from soil: negligible from plants: about 11 % |
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Remarks:

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| Low volatilisation under practical use conditions. |
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3 Ecotoxicology

Terrestrial Vertebrates

Acute toxicity to mammals:
Acute toxicity to birds:
Dietary toxicity to birds:
Reproductive toxicity to birds:
long term oral toxicity to mammals::

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| LD50 > 5 000 mg/kg (rat) |
| LD50 (quail) > 2 150 mg/kg |
| LC50 (quail, duck) > 5 000 ppm |
| NOEC (quail, duck) = 100 ppm |
| NOEL (two generation rat) = 0,9 mg/kg/d |

Aquatic Organisms

Acute toxicity fish:
Long term toxicity fish:
Bioaccumulation fish:
Acute toxicity invertebrate:
Chronic toxicity invertebrate:
Acute toxicity algae:
Chronic toxicity sediment dwelling organism:
Acute toxicity aquatic plants:

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|--|
| LC50 (trout, 96 h) > 1 000 mg/l LC50 (golden orfe, 96 h) > 6 000 mg/l |
| NOEC (trout, 21 d) = 100 mg/l |
| BCF= 2.38 (whole fish) in 7 days |
| EC50 (daphnids, 48 h) = 6.1 mg as/l (test substance: SG 86%) |
| NOEC (daphnids, 21 d) = 0.32 mg/l |
| EC50 (<i>Sc. subspicatus</i> , 72 h) = 2.3 mg/l EC50 (<i>A. flos-aquae</i> , 72 h) = 2.5 mg/l |
| not relevant |
| EC50 (<i>L. gibba</i> , 14 d) = 2.5 mg/l |

Honeybees

Acute oral toxicity:
Acute contact toxicity:

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|------------------|
| > 152 microg/bee |
| > 100 microg/bee |

Other arthropod species

Aphidius colemani
(adults; lab. test)

Effect (mortality): 80 %
(4.72 kg as/ha; test substance: SL 236 g as/l)

Typhlodromus pyri
(protonymphs; lab. test)

Effect (mortality): 100 %
(4.72 kg as/ha; test substance SL 236 g as/l)

Orius insidiosus
(nymphs, 2nd stage; lab. test)

Effect (mortality): 100 %
(4.72 kg as/ha; test substance SL 236 g as/l)

Poecilus cupreus
(adults; lab. test)

Effect (mortality): 3.7 %
(4.72 kg as/ha; test substance SL 236 g as/l)

Poecilus cupreus
(adults; lab. test)

Effect (mortality): 0 %
Effect (food consumption) = 1.18 *
(14.6 kg as/ha; test substance WP 50 % w/w as)

Pardosa armentata
(adults)

Effect (mortality): 100 %
(4.9 kg as/ha; test substance WP 50 % w/w as)

Aleochara bilineata
(adults; lab. test)

Effect (mortality): 0 %
Effect (reproduction) = 0.01 *
(5.0 kg as/ha; test substance WP 50 % w/w as)

Aleochara bilineata
(adults; lab. test)

Effect (mortality): 11.7 %
Effect (fecundity) = 1.0 *
(5.0 kg as/ha; test substance WP 50 % w/w as)

* ratio treated/control

Earthworms

Acute toxicity:

LC50 > 448 mg as/kg

Reproductive toxicity:

not relevant

Soil micro-organisms

Nitrogen mineralization:

transient retardation of nitrification processes,
recovery after 42 d (dose: 4 x PECs).

Carbon mineralization:

no effect (dose: 4 x PECs)

APPENDIX III**AMITROLE**

List of studies for which the main submitter has claimed data protection and which during the re-evaluation process were considered as essential for the evaluation with a view to Annex I inclusion¹.

B.1 Identity, B.2 Physical and chemical properties, B.3 Data on application and further information, B.4 Proposals for classification and labelling, B.5 Methods of analysis

| Annex point/ reference number | Author(s) | Year | Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not | Reports ² on previous use in granting national authorizations |
|----------------------------------|--------------|------|---|--|
| IIA4.2.1 | McGuire C.H. | 1997 | Validation of an analytical method for the determination of amitrole in grapes and analysis of amitrole in grapes Source : HUNTINGTON LIFE SC. (UK) Owner : CFPI Report Nr. : 96/CPF020/0540 GLP Unpublished | |
| IIA4.2.5 | Weber H. | 1997 | Validation of the Bayer method 00125 for the determination of the residues of Amitrole in products of animal origin. Source : Dr. SPECHT & PARTNER Owner : CFPI Report Nr. : CFP-9501V GLP Unpublished | |

¹ List based on a detailed analysis from Rapporteur Member State.

² Reports received from Member States at the date of finalisation of the present review report (not exhaustive).

B.6 Toxicology and metabolism

| Annex point/ reference number | Author(s) | Year | Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not | Reports ² on previous use in granting national authorizations |
|----------------------------------|--|------|--|--|
| IIA5.1 | Iatropoulos M.J., Murray K., Wang C.X. and Williams G.M. | 1995 | Effects of amitrole on hydrogen peroxide degrading enzymes in rat and mouse liver Source : AMERICAN HEALTH FOUNDATION (USA) Owner : CFPI Report Nr. : RM-1510 GLP Unpublished | |
| IIA5.1 | Anderson C. and Brauner A. | 1995 | [5- ¹⁴ C]-amitrole : investigation of the biokinetic behaviour and the metabolism in the rat Source : BAYER AG (D) Owner : CFPI Report Nr. : RM-508/95 GLP Unpublished | |
| IIA5.1 | Marty M. and Vincent C.M. | 1999 | Amitrole (3-amino-1,2,4-triazole) - <i>In vitro</i> cutaneous absorption through human skin Source : Faculté de Pharmacie (F) Owner : CFPI Report Nr. : --- Non GLP Unpublished | |
| IIA5.2.1 | Jouffrey S. de | 1996 | Acute oral toxicity in rats – Technical Amitrole Source : CIT (F) Owner : CFPI Report Nr. : 12897 TAR GLP Unpublished | |
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| IIA5.3.3 | Roger R. | 1999 | Amitrole - Four-week toxicity study by cutaneous route in rats Source : CIT (F) Owner : CFPI Report Nr. : 16998 TSR GLP Unpublished | |
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B.8 Environmental fate and behaviour

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B.9 Ecotoxicology

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